

7610 aa 37

AN
E S S A Y
ON THE
FORMATION, STRUCTURE, AND USE
OF THE
T E E T H.

[PRICE ONE SHILLING.]



FOR MATHEMATICS, PHYSICS, AND USE

H. T. E. F. T. H.

K

LIBRARY OF THE

387
AN
E S S A Y
ON THE
FORMATION, STRUCTURE, AND USE
OF THE
T E E T H.
WITH A
S U P P L E M E N T,
CONTAINING

The necessary Directions and Instructions for
cleaning and preserving them.

W H E R E I N

The Opinions of some ancient and modern
Writers on the Subject, will be impar-
tially considered.

BY MAYER LEWIS, *K*
OPERATOR FOR THE TEETH IN OXFORD.

Dedicated to the GENTLEMEN of that Univerſity.

L O N D O N :

Printed for the AUTHOR, and ſold by J. WHEELER, in
Pater-noster-Row; WILLIAM JACKSON, at Oxford; and
Meſſ. FLETCHER and HODGSON, at Cambridge.

M D C C L X X I I .

HISTORICAL

OF THE
FORMATION, SETTLEMENT AND USE

OF THE
TOWN OF



OF THE
TOWN OF

OF THE
TOWN OF

OF THE
TOWN OF

OF THE
TOWN OF

OF THE
TOWN OF

OF THE
TOWN OF

OF THE
TOWN OF

TO THE
GENTLEMEN
OF THE
UNIVERSITY OF OXFORD.

GENTLEMEN,

THE numerous favours which, during a residence of five years in Oxford, I have received from you, will, I hope, justify the propriety of this dedication ; and make that, which otherwise would appear an act of the highest presumption in me, considered as a small tribute of my gratitude and respect.

Though I might be justly accused of a vanity nearly allied to the extravagance of folly, should I presume to think that I had a deserved claim to your attention and perusal of the following pages, either from the merit of their author, or from their own intrinsic value, yet I cannot but hope for your favourable acceptance of them, when I consider how nearly connected the subject of this treatise is, not only with the necessary regard which ought to be paid to that most valuable of all earthly blessings, and sublunary possessions, health, but also with the objects of your present pursuits at the University, and with your future connections with society in general. For give me leave (not improperly or ludicrously) to observe, that
how-

however ample and extensive the boundaries of your present studies may be, that assistance is certainly requisite which can promote and facilitate the communication of them to the world. The oratory of the pulpit and the bar, with regard to its excellence, depends greatly on the preservation of the teeth; the teeth, which form the regular pronunciation of the voice, and prevent, in a great measure, all impediments and obstructions of the speech.

I could here dwell on the conveniences that attend the preservation of the teeth in private life: the ease in mastication, and the assistance which it gives to the mixture of our food with the salivary liquors,
which

which mixture is necessary towards digestion : the air of floridity and youth, which it imparts to the complexion, and the prevention of all offensive and disagreeable humours, which would otherwise grow in the mouth and gums.—But I shall reserve the discussion of these points to the proper places in which they will be ranged in the following pages.

Could the wishes of an unimportant individual have any efficacy towards the continuance of that celebrity and reputation in which Oxford, that excellent seminary of learning and polite erudition, is deservedly held, I should be happy
in

(vii)

in having a more effectual opportunity than the present of subscribing myself,

GENTLEMEN,

With the highest esteem

And gratitude,

Your most obedient,

And obliged humble servant,

MAYER LEWIS.

A N

in having a more effectual and opportu-
nity than the present of publishing

the Government, and
With the highest esteem

And gratefully

Your most obedient

And obliged humble servant

MAYER LEWIS

(01)

AN
ESSAY
ON THE
TEETH.

THE complaint which generally attends the execution of a work of this kind seems to be, that the author, being puffed up with a vain conceit and opinion of his own abilities and consequence, takes too frequent and unnecessary occasions of introducing in his writings technical terms, and obscure expressions of the art; making that, which professedly undertakes in a clear and simple manner to treat of the disorders incidental to the teeth, and the remedial applications necessary in such a case, a work of laborious inquiry, and a mere display of anatomical
C know-

knowledge. This error I will endeavour cautiously to avoid; as well, because the natural history and anatomical structure of the teeth have been explained and amply treated of in some late very ingenious and elaborate treatises (those I mean written by Mr. John Hunter, F. R. S. and surgeon to St. George's Hospital; and Mr. Beardmore, surgeon dentist in ordinary to his Majesty) as because I should be too circumscribed in such an attempt by the limits of these pages: such an attempt requiring more time and leisure thoroughly to finish than I could be able to secure from my necessary avocations of business. I therefore beg leave to recommend the treatises above mentioned, from the perusal of which I have received great pleasure and satisfaction, to those, whose curiosity or profession lead them to attend to the *minutiae* of the subject.

My design is merely to give a plain and brief account of the teeth, the complaints they are subject to, and the methods of cure; omitting nothing, I hope, which is necessary

necessary to be known, and avoiding all obscurities of stile and meaning. The subject has been already amply and copiously treated of, and I have not the vanity to think that I shall be able to set it, or any branch of it, in a new or more instructive point of view.

The teeth are hard substances of bone and enamel growing in the cavities of the upper and lower jaw. These cavities anatomists call the *alveoli*, which have circular processes embracing the body of the tooth with great closeness, and thereby are to be considered as principal supports of the teeth.

These *alveolar processes* are covered by a compact elastic substance or fleshy covering, called the *gums*; which covering adhering firmly to the *alveolar processes* invests and contains the teeth firm in their sockets: and are besides an admirable protection for them against the injuries they might receive from an exposure to the air and cold, and from the occasional pressure of our food against the thin membrane which covers them. The circular ridge

which separates and distinguishes the body and roots, or fangs of the teeth, and to which the gums grow up, and are closely attached, is called the neck or collar of the tooth. The fangs or roots are those parts which are hid from our sight in the sockets: they are covered with a thin vascular membrane, called the *periostæum*, which unites them firmly to the jaw. The inner substance of the tooth is the bone, having an internal cavity, which extends nearly the whole length of the tooth; beginning at the point of the root or fang, and ending in the body of the tooth. This cavity is well supplied with nerves and blood vessels, which nourish the teeth, promote their growth; and when subject to any disorder or obstruction, are the seat of the most exquisite sensations of pain. The enamel grows only on, and surrounds the body of the tooth. It is a very white and smoothly polished substance, of a degree of hardness so great, as to be impenetrable to our keenest instruments: in cutting or dividing it therefore, we are obliged to use files, and even those must be skilfully used by

by the operators, to prevent any damage being given to the remaining polish of the enamel,

The *shape* of the teeth being within the immediate extent of every one's own knowledge, I shall not here make mention of it. Their *number* is uncertain; though I believe they rarely exceed thirty. Mr. Hunter says, that he once saw only twenty-seven, but never more than thirty-two; and makes thereupon this very sensible remark, "That where the number is less than thirty-two, the deficiency is in the last grinder."—This is, however (I mean the number of teeth in a full subject) a point of mere curiosity; since during the course of my practice, I never could discover any difference in the formation or structure of them, whether more or less in number: but they all equally as well perform their usual functions, and answer the purposes for which they are designed. The number is not certain, I think, for this reason, *viz.* that if it were, when the jaw bone
of

of a man is enlarged, and grows in proportion to the increase of his age, we do not find any difference in the *alveolar spaces*, either with regard to their number or extension, which would otherwise undoubtedly happen in the case between a man, who in his perfect state, had thirty-two teeth, and of another, who had only thirty.

The above is a brief description of the situation and structure of the teeth: the formation of them is curious and particular, which I will endeavour to give as satisfactory and concise an account of, as the limits of this work will permit.

The contents of the *alveoli*, or cavities in the jaw, in which the teeth grow; are at almost the earliest state of infancy, some little soft pulpy substances which are attached to the bottom of the sockets by a nervous filament, whose vessels diffuse themselves through the pulpy substances, and the thin membrane that covers them.

Nourish-

Nourishment is hereby conveyed to these pulpy substances, which, as the child increases in age, begin gradually to ossify, and advance higher and higher from the sockets. The tooth is yet imperfectly formed, not having gained any degree of strength and rigidity. By degrees they begin to press against the gums, which, by constant attrition are inflamed and affected with redness and swelling, and occasion great pain and uneasiness to the infant. What is called *the cutting of the teeth* now begins, which is a violent effort of nature to pierce through the confinement of the gums, where the teeth have undergone the state of formation and ossification, and to appear above the sockets. As this operation of nature is attended with great and continued pain to the child, and frequently not finished without the hazard of much danger, it has been a matter of surprize to some gentlemen of eminence in surgery. that a new and more expeditious method has not been introduced to assist the cutting of the teeth, and that the efforts and endeavours

vours of nature have not been, as in almost all other cases, promoted by the assistance of art. Those gentlemen have thought; and with great appearance of reason and good sense, that no danger or inconvenience would attend the opening of the gums at the particular time of the first appearance of dentition, with an instrument, and thereby, by making a way for the teeth to raise themselves from the sockets to prevent the slow advances of nature. The instrument certainly must be managed with a nice and skilful hand; or it may, by penetrating too deep, do much harm and damage to the tooth itself, not yet sufficiently hardened. I cannot suggest to myself any plausible objection to the propriety and expediency of this plan; however, I willingly submit this opinion to the judgments of those gentlemen, who claim a superior knowledge in this point, from their attendance upon children in their infancy; my practice having been chiefly confined to the care of the teeth in their full grown and perfect state.

Anatomists

Anatomists divide the teeth into three classes; viz. The *incisores*, or cutting teeth, the *canini*, or canine teeth, and the *molars* or Grinders: the first class including the four anterior teeth; the second including the two next, one on each side, called the *canine teeth*, from the similarity and resemblance they bear to the teeth of dogs; and the third including the rest. For a particular description of which, I beg leave to refer the curious reader to Mr. Hunter's late treatise, which I mentioned before, where he will receive every degree of intelligence and satisfaction to his inquiries. I do not here take so much notice of them, as perhaps some people may think I ought; as their situation and parts are pretty universally marked out to every one's knowledge, and all that could be said would amount only to some comparative remarks on their different degrees of prominence, thickness, or other inherent properties.

Having thus briefly treated of the formation and structure of the teeth, the third

D

pro-

proposed point, *viz. their use*, comes under our consideration. This, though already appearing sufficiently clear and comprehensive, may be thought to stand in need of no farther explanatory elucidation ; but really the preservation and care of the teeth being a matter of no small consequence, indeed of much greater importance than the generality of mankind seem from their indolence and inattention to them to suspect, I beg leave to be indulged in a few words. The teeth are parts which will sooner decay and become disordered through neglect, than any other parts of our Frame ; and, when disordered, occasion greater pain, and introduce a greater variety of other complaints than can be conjectured upon casual consideration. An enumeration of the benefits arising from their *perfect* state may therefore make us more attentive to them, and more desirous of avoiding the numerous train of inconveniences and disorders we shall feel upon their decay and *imperfect* state.

The

The most common and principal uses which we find to result from the growth and perfection of the teeth, are the assistances they give us in mastication, and in speech. I speak from the common experience which every one must be presumed to be in possession of, when I mention the painful and unpleasant operation of chewing our food, at a time when any accident or disorder has deprived us of the temporary or entire loss of our teeth, not to mention any physical reasons of the harm it may do our constitution, when the necessary assistance which the food we eat requires to promote its speedy mixture with the salivary liquor, facilitating thereby its passage into the stomach, and occasioning a pleasant and safe digestion, is lost or impaired. Another inconvenience will arise in this case, from the continual pressure of our food against the gums, which may irritate and inflame them; occasioning, thereby, soreness and swellings.

In speech, we all know the well timed, and regular aid, which the teeth in their perfect state give to our voice and pronunciation; and, by consequence, the essential service they are of to the study and practice of oratory in public life; where the form of the English government and constitution, the elevated rank and esteem in which the liberal professions are held, and the reputation and fashionable celebrity which *public speaking* claims, give the happiest opportunities for eloquence to display her powers, and engage and captivate the attention of the largest assemblies: and in private life, where a graceful and elegant address are no less necessary to attach us to the good opinion and favour of our neighbours, who would not be susceptible of so favourable an impression in our behalf, by an imperfect and broken voice, and a difficulty of expressing our sentiments with fluency, and facility; which I affirm, will be the case in a disordered and rotten state of the teeth. The tongue, indeed, modifies the voice, and gives it different forms, but I cannot help
being

being seriously of opinion, that the various graces of pronunciation arise from the assistance of the teeth; I mean according to the propulsion of the tongue against the teeth, which detains or transmits the sounds at pleasure. This is, indeed, too curious, and indeed too philosophical an argument to be attended too in this short treatise, nor is it at all of consequence in common observations. The easiness wherewith we speak, and the pleasure we take in hearing an harangue gracefully, and well pronounced are, I am sure, not superficial or trifling recommendations to us to keep, when in our power, the organs of speech perfect and unimpaired; of which organs I by no means reckon the teeth in an inferior class.

A collateral advantage arising from the care and preservation of the teeth, is the grace and symmetry they give to the countenance, keeping the complexion in a state of youthful bloom, and preventing all wrinkles about the face; which the depression of the jaws, in consequence of the
loss

loss of our teeth, would inevitably occasion. It is, I am told by my own and other people's observations, a prevailing fashion in the present age to keep the face and the complexion as delicate and smooth as art can make them: (I speak not here of our English ladies, whose care in this particular is laudable, graceful, and characteristic of that amiable part of the creation) but, without meaning any offence to that part of mankind, whom the uncouth rusticity and unpoliteness of some amongst us think they disgrace by giving them the appellation of *Beaus*, I beg leave to remind the younger part of my readers, that though they may possibly take *too much* pains in adorning their persons, and thereby incur the charge of effeminacy, and the want of a decent and proper manliness, yet I think they may oftentimes take *too little* care in this particular; and none can be attended with more disagreeable and offensive sensations, both to themselves and their friends, than the neglect of the teeth.—Excuses may be made frequently for any neglect of

Dress

Dress—slovenly apparel—or unpowdered curls, which may be occasioned by a want of time to undergo the various processes of dressing, or the avocations of business. But no excuses can be made, or taken for a dirty and foul set of teeth, which argue an habitual neglect of them, and either a wilful or (what is just as bad in this case) an unintentional omission of the employment of cleaning them; which employment, when rightly understood, and frequently practised, is attended with no length of time, nor the least trouble.

The disorders to which the teeth are subject, either simply from the neglect of them, or from an ill habit and state of body, are numerous. Suffice it here to mention a few; a perfect knowledge of which will, I am persuaded, give weight to my opinion and advice, relative to the care of them. The tooth ache, is a pain, which, as it arises from various causes, I suppose, there are few amongst us, who have at all times been totally exempt from. The pain and
anguish

anguish are more violent and excruciating than the visitation of diseases to other parts of the body. Shakespear, the immortal poet of the English nation says,

—There never was philosopher yet,
Who could endure the *tooth-ache* patiently.

Meaning certainly thereby, that with whatever great fortitude, and philosophical patience, other disorders might be born and combated with.—The pain of the tooth ache surpassed all human resolution and courage. The anguish is frequently so insupportable that it forces us to use violent means to obtain some kind of temporary ease, which means occasion, not a long time after, a greater and more afflicting return of the disorder.—Such are, I think unnecessary extraction of the teeth, which, according to some modern operators, is the universal method of cure; without considering that the pain may be oftentimes alleviated by gentle methods, and the tooth preserved entire. It frequently happens that the pain is severely felt in sound teeth,
owing

owing to ulcers and excrescencies on the gums, sudden colds, from sympathy with the neighbouring affected parts, or other causes. Can the extraction of those sound teeth be therefore in such cases deemed necessary, or even expedient? common experience and sense shew the contrary.—We cannot perform the operation without increasing the evil which it is intended to diminish or remove. By uncovering the roots, and baring the sockets of the neighbouring teeth, we make them loose, and susceptible of pain, and cause frequent inflammations in their nerves and vascular parts. I have known not a few instances where the extraction of one of the *molars* or grinders has considerably weakened the jaw, though performed in a skilful manner, and by a violent distension of the muscles of the jaw, brought on a great soreness and inflammation of them. I am, however, a great friend to extraction when

E

the

the circumstances of the case positively demand it. Another method no less injudicious of expelling the pain, and gaining a temporary relief, is the filling the mouth with acrid and hot spices and substances, and burning spirituous liquors; which deaden all sensation for a while, but when their influence is at an end the pain returns with redoubled strength and severity; exclusive of the harm which such applications certainly do the gums by disposing them to inflammations, and occasioning forenesses, and external swellings.

The tooth ache is frequently occasioned by acrid humours being lodged in the sockets of the teeth, and purulent matter, which affects the roots of the teeth, and is always attended with a foul and offensive smell of the breath. In this case, if the cure be not speedily undertaken, the whole
tooth

tooth becomes quite rotten and carious: the nerves and vessels are corrupted, and ulcerations of the parts will ensue. Of this kind is the scurvy, that most inveterate enemy to the soundness of the teeth, which is however very effectually dislodged by lancing the gums, and extracting the coagulated blood and matter. The tartar of the teeth is another cause of their destruction, which is a yellowish substance formed on the teeth, which hardens in time, and forms a compleat incrustation over them: deforming and discolouring them, and by secretly and imperceptibly insinuating itself in the *interstices* of the teeth, open too great a passage between them, prevent the growth of the gums by an inconvenient pressure of them, and are productive of a numerous train of disorders. This tartar, however, when *early discovered*, is very easily removed, being at first of a soft pulpy nature, and may be rubbed off the teeth by

washing the mouth with clean water, and afterwards gently rubbing the teeth with a soft spongy brush, or by using any common tooth powder. When however it has formed an incrustation too hard to be rubbed off in that manner, having acquired a strong adhesion to the teeth, the operator's instrument must be used, but great care is necessary to be taken in the use of it, so as not to damage the enamel. Some kind of an inflammation in the gums generally attends this operation, which inflammation may however be reduced with gentle means.

Venereal complaints, and the great quantities of mercury which are generally administered, in such cases, affect the teeth and gums in a violent degree: destroy the nourishment which the teeth should receive from the nerves and blood vessels, impoverish and render the gums pale and flaccid; loosen the teeth from their sockets, and occasion

casions putrid disorders, attended with foulnesses of breath. I am not versed in surgery enough to be able to declare what methods, to prevent such complaints and evils, should be taken, during the continuance of that venereal disorder to which they owe their rise, but certainly would recommend at the re-establishment of the patient's health, that he should have his teeth thoroughly cleaned, his gums lanced, and all the other necessary processes performed, whereby the gums will regain their former redness and firmness, and adhere, as originally, closely to the teeth; the teeth will be cleared from all foul discolorations, all the coagulated blood will be removed from the sockets, and every part be braced a new and strengthened.

The tooth-ache is frequently communicated by *sympathy*, from one tooth to another. This may seem surprizing, but I find all

all writers on the subject I have consulted, agree in the opinion, I thought without assigning any cause for so extraordinary a phenomenon. We must not, however, carry our notions of sympathetic affections so far as I remember one writer of my own country has done. I mean one *Darlack Costl.* who was a German and lived I think in the year 1558 under Ferdinand the First. In a treatise of his writing upon surgery, (which I remember to have seen in manuscript in Leipzig) he positively affirms, that sympathy may be communicated by contact to other animals: and mentions some instances where he has known the tooth-ache transferred from a man to a cat, by applying the man's cheek for a considerable time together, to that of the cat. The tooth-ache left the man, and the animal was seized with the violence of the pain, as was supposed, by the agony she seemed to labour under, and the squalling

He she

she made. This will, I make no doubt, be looked upon by all serious and sensible people as a foolish notion, and not founded in fact; and indeed I am greatly surprized that that writer should so warmly insist on the reality of it, as he was undoubtedly, by several works which he left behind him, a man of great wisdom and learning.

I will now just mention a few cases, in which extraction of the teeth may be expedient or necessary, which will introduce some observations upon artificial teeth, and the practice of filling up hollow teeth with gold or lead.

When the scurvy, or other putrid humour, lies preying upon the roots or fangs of the teeth, removed beyond the reach of those instruments that can extract it from the gums by lancing them; when it destroys the nerves, and corrupts the foundation

dation of the tooth ; in such cases, I must
 deem extraction necessary, and that it is so,
 will incontestibly appear, since we find the
 root or fang of the tooth quite covered with
 the corrupted matter, when we have pul-
 led it out : which corrupted matter there
 is no possibility of reaching with our in-
 struments, or expelling by any other means
 than extirpation, as it lies so close and con-
 cealed. Were the tooth to continue in the
 head, the corrupted matter would eat the
 tooth gradually upwards, and occasion a
 putrid decay of the gums. Stumps or por-
 tions of the roots of teeth which have
 either been broken off, or injudiciously ex-
 tracted, ought certainly to be drawn.
 There is not much pain in this operation,
 when skilfully performed, in a comparative
 sense with regard to *whole* teeth being
 extracted. Mr. Beardmore's opinion is,
 that " when any tooth-ache arises from a
 " portion of the root left behind, if the
 noted " patient

" patient is unwilling to try this second
 " operation, the pain may be sometimes
 " removed by burning the nerve, or by
 " applying a very small bit of lint dipped
 " in essential oil of cinnamon, over the
 " hollow part of the stump, or by intro-
 " ducing a bit of paste made of opium,
 " camphor, and essential oil of pepper
 " mint." But with all possible deference to
 his opinion, I should certainly prefer the
 extraction of the stump, and recommend it
 in such strong terms to the patient, as would,
 I think induce him to submit to the opera-
 tion. Palliative applications may give
 ease, though Mr. Beardmore seems him-
 self to own the case to be uncertain, by
 making use of the word "*sometimes* ;" but I
 think the pain will return in a short time,
 or the gums will grow over these stumps,
 and being constantly wounded by them,
 will be exposed to frequent inflammations,
 and extremities of pain. I am happy in
 E having

having Mr. Beardmore's authority to sanction my opinion, that "The stump or
 " root of a tooth is at all times easily taken
 " out, unless it grows to the jaw bone,
 " which is a very rare case; and nothing is
 " more erroneous than the popular notion
 " that stumps are very difficult to be removed, and that digging and punching (as
 " they call it) are absolutely necessary."

Stopping the teeth, or filling them with gold, or lead, is a very useful practice, and attended with no inconveniences. This is necessary when the internal part of the tooth is destroyed, or wasted away, and something must be put in the cavity, to prevent the air from piercing to the fang, or root of it, and occasioning the tooth-ache, or a further decay; as also for hindering loose bits of our food, &c. from lodging in the said cavity. The cavity then, in which the nerve formerly lodged, must
 be

be well filled up with gold or lead, and, if occasion be, may be fastened by a wire or thread to the neighbouring teeth: however, after it has been well pressed down in the hole, there will be no danger of its falling out.

When there is a real necessity of extracting teeth, or they grow loose from any venereal or putrid disorder in the blood, I am a great friend to the practice of supplying their places with artificial teeth. After a little use, they equally as well perform the different offices of real teeth, in mastication, in speech, and in appearance. Indeed to such a pitch of greatness has the art and ingenuity of modern times arrived, that operators can make them, and fit them in the sockets in such a manner as not to be discernible from our natural teeth. After washing the mouth constantly for some time afterwards with some astringent liquors,

we find that the gums will closely adhere to these artificial teeth. I have frequently made and set whole rows of artificial teeth, which have looked very ornamental, and have given an healthy air to the countenance. The general objection seems to be that they do not fit firm and easy in the sockets, but are apt to fall out. This objection I flatter myself, in the course of my practice as a dentist, I can wholly obviate: for without meaning or wishing to be my own panegyrist, or desirous of arrogating any credit to extravagant professions which some modern operators for the teeth among us do, I can safely pronounce that this branch of the profession has employed greatly my time and attention, and I have, in consequence of that attention, discovered a method of setting and fixing them almost immovably in the sockets, without the great number of wires and ligatures which are commonly used.

It

It remains for me now to say something of the care and treatment of the teeth and gums, to prevent diseases and complaints in them,—the methods of cure, and the necessary instructions for cleaning them, and preserving their polish and whiteness.—But I here perceive a difficulty which I was not aware of at first, which is, the impossibility of all the rules and directions I mean to propose being equally salutary and efficacious in *all* cases.—*Different* modes of treatment must be prescribed in *different* cases ;—and as it would be morally impossible for me now to know the different state of the teeth in all my different readers, the various complaints they labour under, and whether they have ever taken care of their teeth or not, it is equally as impossible to advance any directions which would be of necessary assistance *to all, in all cases* ; I shall however be exceedingly happy when any persons approve so far of the sentiments
and

and opinions advanced in the above pages, and think the contents of this work of consequence enough to let me have the honour of attending them; whereby I shall be able upon a personal and direct view of the case to decide with some degree of certainty, and to found my advice upon ocular proofs.—The scurvy must certainly be removed from the gums, and all tartareous concretions separated from the teeth, and all putrid matter dislodged from the sockets, before we can think of using any external application to make the teeth white and clean: for otherwise, might they not be compared, with great plausibility, to sepulchres and monuments, which are painted and adorned with pure and splendid marble on the outside, but within contain nothing but rottenness and corruption?

I think it therefore necessary, as I said before, to have the scurvy removed from the gums; all tartareous concretions separated from the teeth; and all putrid matter dislodged from the sockets *first*; and *then* external applications may be used to make the teeth white, and free them from all discolorations,

I cannot help thinking, (notwithstanding what I am going to say opposes the opinions and advice of some of our modern writers on the subject, though I believe that *Hoffman* and *Heister*, two German writers of eminence on physic and surgery, have introduced their approbation of the point in question) that the occasional use of tooth-picks is necessary in an high degree to remove what scraps of our food have lodged between the interstices of our teeth,

teeth, and to give a salutary *stimulus* to the gums. The objections I hear, are certainly levelled against too constant an application of tooth-picks; but to argue against a practice and use in general terms, because it is frequently abused, and carried to too great extremities in particular instances, is absurd and ridiculous. The custom of washing the mouth with clear water, after the use of tooth-picks, is certainly judicious, and the custom of using occasionally cool emollient gargles.

I could willingly indulge my pen in a further prolixity, but am fearful of engaging the attention of my readers longer than their patience will countenance: and likewise of making this a work of laborious and diligent investigations, which is only a short collection of a few casual observations.

servations and loose remarks, which I have hastily thrown together, and now venture to solicit the patronage and protection of the Gentlemen of the University of Oxford, as this publication is in consequence of the desire of many of them, founded upon too favourable an opinion of the author's merit.

F I N I S.